

AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes a change to Figure 11 and replaces the original sheet inclusive of Figs. 1 and 11.

FIG. 11 – existing reference numeral 55 has been changed to 57.

Attachment: Replacement sheet (Figs. 1, 11)

REMARKS

Reconsideration of the present application is requested.

The present invention relates to a tire tread which is to be regrooved.

Typically, when a tread is worn until the tread wear indicators have been reached, it is recommended in the truck tire domain to make new grooves in the remaining tread rubber. Those new grooves can be made by an operator with the help of special tools. Currently, the operations are time-consuming and require a heightened degree of precision in order to avoid injuring the belt reinforcing structure of the tire.

It is conventional to provide filler material within the tread to occupy the regrooving groove. As soon as the wear of the tread reaches the filler material, that material is ejected by centrifugal force, thus forming new grooves. However, this results in the ejection of pieces of filler material of various sizes which when thrown off at high speeds can present a potential risk to nearby people or vehicles, as well as polluting the environment.

The problem of ejected tread-pieces is demonstrated by JP '516 and Schrank U.S. Patent 2,246,479, of record, each of which disclosing how a tread piece can be automatically ejected once it becomes exposed (see Fig. 3c of JP '516, ad Fig. 5 of Schrank).

The presently claimed invention deals with that problem by providing an arrangement wherein even after the filler material has been exposed by tread wear, there remains a portion of the tread rubber that is situated for resisting radially forces tending to eject the filler material from the tread. that remaining tread portion can be cut away to enable the filler material to be safely removed.

Claim 18 has been amended to be directed to a tire, and to eliminate the language deemed objectionable on page 3 of the Official action. Claim 18 recites that the anti-connection element comprises two branch portions each having radially inner and outer ends and a common part interconnecting the radially inner ends, the two branch portions forming, together with the common part, a space occupied by filler material (e.g., see the branch portions 51, 52 of the Fig. 2 embodiment which are interconnected by a common part 54). Claim 18 also recites that the anti-connection element includes a recess arrangement formed therein which enables rubber of the tread to form a retaining portion (e.g., a bridge) extending from one branch portion to the other at a location radially inwardly of the radially outermost portion of the anti-connection element and radially outwardly of the common part, to resist radial forces tending to eject the filler material once tire wear causes the radially outermost ends of the branch portions to open on to the running surface and expose the space.

Claim 18 stands rejected as obvious over De Labareyre et al. in view of Japan '516, Lagnier et al. WO '009 or Schrank (U.S. '479). De Labareyre et al. does not relate to the regrooving of a tire tread after a period of wear, but rather to improving the adhesion of a tread on the road, with a low level of noise. There is provided a tread having cut-outs, with connecting elements 7 extending across the cut-outs. However, as conceded on page 7 of the Official action, De Labareyre et al. does not disclose an insert (e.g., an anti rubber-on-rubber element) forming a space occupied by a volume of filler material such that removal of the insert (and the filler material) forms an incision or void which delimits a volume of rubber.

The Official action then resorts to the secondary references. However, only two of those secondary references, i.e., JP '516 and Schrank relate to treads having pieces that are removable for creating grooves. Moreover, as noted above, each of those two secondary references perpetuates the problem which the present invention alleviates, i.e., the automatic ejection of the pieces during travel in a manner creating a safety hazard. It is not seen why an artisan would be at all motivated to convert the tread of De Labareyre et al. to a regroovable tread having removable pieces of material to create new grooves. Even if an artisan were so motivated, it is not seen that he/she would deviate from the teachings of the secondary references that deal with regrooving, such as the teaching of providing automatic ejection of the pieces. There is no disclosure in De Labareyre et al. that the automatic expulsion of the pieces may create a safety hazard; De Labareyre et al. is not concerned with that type of safety concerns, but only with the enhancing of road adhesion with less noise creation.

The third of the secondary references, Lagnier et al., does not provide a tire with expellable pieces. Rather, hidden incisions are provided which become exposed after tread wear (see U.S. Patent No. 6,408,910 which is the English equivalent of Lagnier et al.). Thus, like De Labareyre et al., Lagnier et al. does not disclose or teach using an insert forming a space which delimits a volume of filler material occupying the space such that removal of the insert and the filler material forms a groove.

Accordingly, it is submitted that there is no obvious combination of De Labareyre et al., with Japan '516, Lagnier et al., or Schrank which would result in the tire defined by claim 18. Thus, it is submitted that claim 18 and dependent claims 20-24, 26-29, 31-35, and 37 are allowable.

Regarding claim 37, nowhere in the cited prior art is there disclosed the step of cutting-out a retaining portion to remove a filler material in order to regroove a tire tread.

New independent claim 38 is similar to claim 18, but instead of reciting that the retaining portion extends from one branch portion to the other, recites that the retaining portion is connected to the filler material. Thus, claim 38 would also encompass an embodiment such as that disclosed in connection with Fig. 11 and recited with particularity in dependent claim 41, wherein the filler materials in spaced-apart sections of the anti-connection element are interconnected by the tread rubber. At least a portion of the interconnection occurs at a location radially inwardly of the radially outermost portion of the anti-connection element so the filler materials are retained even after tread wear exposes the radially outermost ends of the branches.

It is submitted that claim 38 and dependent claims 39-42 are allowable over the cited prior art for the same reasons as claim 1.

The objections raised against claim 26 has been obviated by changing "generally" to – substantially --. Claims 22 and 32 have been amended to overcome the objections thereto set forth on page 5.

Fig. 11 has been amended to overcome the objections thereto.

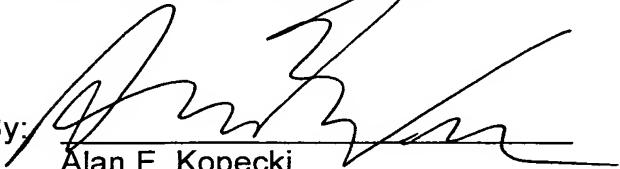
In light of the foregoing, it is submitted that the present application is in condition for allowance.

Respectfully submitted,

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